

U. S. ENVIRONMENTAL PROTECTION AGENCY  
REGION VI

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**TENTATIVE DECISION**

BY THE REGIONAL  
ADMINISTRATOR  
TO DENY  
FUNDAMENTALLY DIFFERENT FACTORS  
VARIANCE REQUESTS

from:

The Oil and Gas Industry Companies (OGICs)  
for Undeveloped and Developed Lease Blocks  
and Production Platforms in the Gulf of Mexico  
General Permit Number GMG290000

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Region VI  
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**In the Matter of:**

The Oil and Gas Industry Companies (OGIC)

**TENTATIVE DECISION OF THE ADMINISTRATOR, USEPA TO DENY THE  
FUNDAMENTALLY DIFFERENT FACTORS VARIANCE REQUESTS**

**1.0 SUMMARY**

A number of Oil and Gas Industry Companies (OGICs) that own and operate oil production platforms and developed and undeveloped lease blocks in the Gulf of Mexico are seeking alternate best available technology economically achievable (BAT) oil and grease limits for produced water discharges. These facilities are subject to limitations for the Oil and Gas Extraction Point Source Category, Subpart A - Offshore Subcategory specified in 40 CFR Part 435. The OGICs are seeking relief claiming that "non-hydrocarbon organic compounds" measured by EPA Method 413.1 are not removed by the technology upon which the effluent limitations were based (i.e., improved gas flotation).

A total of 84 Fundamentally Different Factors (FDF) variance requests were submitted to USEPA Region VI between August 27 and September 8, 1993. **(Ref. 1)** These requests represent 107 production platforms and 2,358 developed and undeveloped lease blocks. The requests were immediately forwarded to EPA Headquarters. The companies seeking relief are as follows:

Anadarko Petroleum Corporation (Anadarko)  
ARCO Oil and Gas Company (ARCO)  
Chevron USA Production Company (Chevron)  
Conoco, Inc. (Conoco)  
CanadianOxy Offshore Production Company (COOPCO)  
Freeport-McMoRan  
Kerr-McGee Corporation (Kerr-McGee)  
Marathon Oil Company (Marathon)  
Pennzoil Petroleum Company (PPC)  
Pennzoil Exploration and Production Company (PEPCO)  
Shell Offshore, Inc. (Shell)  
Shell Western Exploration and Production Inc. (SWEPI)  
Texaco Exploration and Production, Inc. (Texaco E&P)  
Texaco, Inc. (Texaco)  
Four Star Oil and Gas Company (Four Star)  
Union Oil Company of California (UNOCAL)

EPA is proposing to deny these FDF variance requests because they do not satisfy the criteria specified in §301(n) of the CWA or 40 CFR § 125.31. The findings and rationale are contained in this tentative decision. This tentative decision will be subject to public notice and opportunity for comment. After the close of the public comment period, a final decision will be made. Appeal of the final decision is available under the provisions of 40 CFR §§ 124.64 and 124.74.

## **2.0 BACKGROUND**

### **2.1 NPDES PERMIT PROGRAM**

Section 301 of the CWA prohibits any discharge of pollutants from point sources to waters of the United States without a permit. Section 402 of the CWA establishes the National Pollutant Discharge Elimination System (NPDES) permit program. The NPDES permit is the vehicle for the application of technology-based effluent limitations (BPT-Best Practicable Control Technology Currently Available, BAT-Best Available Control Technology Economically Achievable, and BCT-Best Conventional Pollutant Control Technology) and New Source Performance Standards (NSPS), along with appropriate water quality-based effluent limitations and other conditions, to direct dischargers. As part of its effort to establish technology-based limitations and standards, EPA has established various Effluent Limitations Guidelines (ELGs) and performance standards for various industrial point source categories.

### **2.2 EFFLUENT LIMITATIONS GUIDELINES**

On March 4, 1993, EPA published (58 FR 12454) the ELGs and NSPS for the Offshore Subcategory of the Oil and Gas Extraction Point Source Category. This regulation specifies the effluent limitations required by the application of BCT, BAT and NSPS applicable to existing and new source dischargers. Provisions of the guidelines that are applicable to this FDF variance request are specified in the Oil and Gas Extraction Point Source Category, 40 CFR Part 435, Subpart A - Offshore Subcategory. The applicants are seeking relief from oil and grease limits of 29 mg/l monthly average and 42 mg/l daily maximum.

### **2.3 WATER QUALITY ACT OF 1987 AND APPROPRIATE REGULATIONS**

On February 4, 1987, the Water Quality Act of 1987 (WQA), P.L. 100-4, was enacted. Section 306 of the WQA amended Section 301 of the CWA by adding a new subsection (n) for FDF variances, which provides a statutory basis for FDF variances from BAT, BCT, and PSES. The provisions of Section 301(n) include four criteria for approval of BAT, BCT, and PSES FDF variances which require the owner or operator of a facility to demonstrate that:

1. The facility is fundamentally different with respect to the factors (other than cost) specified in Sections 304(b) or 304(g) and considered by the Administrator in establishing such national ELGs;
2. The application for the FDF variance (1) is based solely on information and supporting data submitted to the Administrator during the rulemaking for establishment of the applicable national ELGs specifically raising the factors

that are fundamentally different for such a facility; or (2) is based on information and supporting data referred to in clause (1) and information and supporting data that the applicant did not have a reasonable opportunity to submit during such rulemaking;

3. The alternative requirement is no less stringent than justified by the fundamental difference; and
4. The alternative requirement will not result in a non-water quality environmental impact which is markedly more adverse than the impact considered by the Administrator in establishing such national ELGs.

The provisions of Section 301(n) are applicable to pending BAT FDF variance requests and serve as the basis for the evaluation of the OGIC's request.

The legislative history of Section 301(n) states that the FDF variance applicant has the burden of proving eligibility for an FDF variance. Similarly, 40 CFR §125.32(b)(1) specifically imposes the burden upon the applicant to show that the factors relating to the discharge controlled by the applicant's permit which are claimed to be fundamentally different, are, in fact, fundamentally different from those factors considered by EPA in establishing the applicable guidelines.

## **2.4 FDF VARIANCE REGULATIONS**

EPA regulations at 40 CFR Part 125 Subpart D contain provisions authorizing the EPA Regional Administrator to establish alternative limitations more or less stringent than those contained in the national ELGs. These alternative limitations are permissible when there are factors present at a specific plant that are fundamentally different from the factors EPA considered during development of the limitations. These regulations detail the substantive factors used to evaluate FDF variance requests for direct dischargers. 40 CFR § 125.31(d) establishes six factors that may be considered in determining if a facility is fundamentally different. The Agency must determine whether, on the basis of one or more of these factors, the facility in question is fundamentally different from the facilities and factors considered by EPA in developing the nationally applicable effluent guidelines. The six factors are as follows;

1. The nature or quality of pollutants contained in the raw waste load of the discharger's process wastewater;
2. The volume of the discharger's process wastewater and effluent discharged;

3. Non-water quality environmental impacts of control and treatment of the discharger's raw waste load;
4. Energy requirements of the application of control and treatment technology;
5. Age, size, land availability, and configuration as they relate to the discharger's equipment or facilities, processes employed, process changes, and engineering aspects of the application of control technology; and
6. Cost of compliance with required technology.

In addition to the above six factors which may be considered in granting variances, 40 CFR § 125.31(e) lists four factors that may not be the basis for an FDF variance. These are as follows:

1. The infeasibility of installing the required waste treatment equipment within the time the Act allows;
2. The assertion that the national limitations cannot be achieved with the appropriate waste treatment facilities installed, if such assertion is not based on the factor(s) listed in § 125.31(d);
3. The discharger's ability to pay for the required waste treatment; or
4. The impact of the discharge on local receiving water quality.

If EPA finds that fundamentally different factors exist, and that compliance with the national limitations would result in either (a) a removal cost wholly out of proportion to the removal cost considered during development of the national limitations, or (b) a non-water quality environmental impact (including energy requirements) fundamentally more adverse than the impact considered during development of the national limits, and that all other applicable provisions of the regulations are satisfied, then EPA may establish alternative effluent limitations than would otherwise be required in the applicant's NPDES permit.

Other provisions relating to application deadlines and procedures for processing variances are contained in the NPDES regulations in 40 CFR Parts 122 and 124.

### **3.0 THE OFFSHORE OIL AND GAS INDUSTRY (GULF OF MEXICO)**

#### **3.1 FACILITY DESCRIPTION**

The OGICs have applied for FDF variances for the production sites which they own and operate in the Gulf of Mexico. These sites are at various stages of development, and include undeveloped lease blocks. Undeveloped lease blocks are pre-surveyed areas purchased by an oil and gas company for exploratory and/or development drilling. No equipment has been installed and thus, there are no discharges of produced water. Development facilities include those involved in the drilling of wells into a potentially productive reservoir to extract hydrocarbons. Production facilities are those engaged in the long-term removal of hydrocarbons from the reservoir until it is depleted. Development and production activities are performed from fixed platforms or mobile offshore drilling units.

The major waste streams generated in the offshore oil and gas extraction industry are drilling fluids and drill cuttings, from drilling and development, and produced water from production of oil and gas. These FDF variance requests address produced water discharges from undeveloped lease blocks, development facilities, and production facilities.

#### **3.2 FDF VARIANCE REQUEST**

Between August 27 and September 8, 1993, the OGICs submitted 84 FDF variance requests to USEPA Region VI for 107 production platforms and 2,358 developed and undeveloped lease blocks in the Gulf of Mexico. **(Ref. 1)** The OGICs are seeking relief from the BAT oil and grease effluent limitations. The OGICs contend that the following reasons entitle their facilities to FDF variances:

- 3.2.1      The presence of significant levels of "non-hydrocarbon organic compounds" in produced water was not considered in the formulation of the limitations.



- 3.2.2 Improved gas flotation (i.e., BAT technology) does not remove "non-hydrocarbon organic compounds" from produced water discharges.
- 3.2.3 Effluent from a number of the production platforms only contains small amounts of "non-hydrocarbon organic compounds". However, these platforms wish to retain the right to file for relief in the event the "non-hydrocarbon organic compounds" concentration increases.
- 3.2.4 Based on data from "similar" platforms, many developed and undeveloped lease blocks which currently have no produced water discharges may not be able to meet the new BAT limits.

The following applicants request that reporting of hydrocarbons as reported by Standard Method 5520F (Total Petroleum Hydrocarbons) be accepted as equivalent demonstration for compliance with Total Oil & Grease limitations as measured by EPA Method 413.1:

Anadarko: High Island A-376 A

ARCO: Mississippi Canyon 148 A

ARCO: Brazos 451 A

ARCO: East Cameron 060 A

ARCO: Eugene Island 175 B

ARCO: High Island 177 A

ARCO: High Island 024-L A

ARCO: High Island 024-L B

ARCO: Matagorda Island 668 A

ARCO: Matagorda Island 591 A

ARCO: Matagorda Island 703 A

ARCO: Mustang Island 762 A

ARCO: Ship Shoal 178 A

ARCO: Ship Shoal 91 'A/B'

ARCO: South Pass 60 C

ARCO: South Pass 60 D

ARCO: 210 developed/undeveloped lease blocks (see Appendix C)

Conoco: East Cameron 57 JA

Conoco: Grand Isle 43 AP

Conoco: Main Pass 296 B

Conoco: Vermilion 22 B

Conoco: East Cameron 33 A

Conoco: East Cameron 33 D

Conoco: East Cameron 42 C

Conoco: East Cameron 47 JP

Conoco: Eugene Island 243 A

Conoco: Eugene Island 266 C

Conoco: Eugene Island 266 E

Conoco: Eugene Island 267 I

Conoco: Ewing Bank 305 A  
 Conoco: Grand Isle 47 AP  
 Conoco: Green Canyon 52 CPP  
 Conoco: Main Pass 288 A  
 Conoco: Main Pass 296 A  
 Conoco: Main Pass 296 C  
 Conoco: Main Pass 311 A  
 Conoco: Main Pass 311 B  
 Conoco: Ship Shoal 198 GP  
 Conoco: South Marsh Island 106 A  
 Conoco: South Marsh Island 108 D  
 Conoco: South Marsh Island 108 G  
 Conoco: South Marsh Island 137 A  
 Conoco: South Pass 75 A  
 Conoco: West Cameron 65 JA  
 Conoco: West Cameron 66 A  
 Conoco: West Cameron 66 B  
 Conoco: West Cameron 66 C  
 Conoco: West Delta 70 I  
 Conoco: West Delta 94 G  
 Conoco: 203 undeveloped lease blocks (see Appendix F)

COOPCO: Eugene Island 257 E  
 COOPCO: Eugene Island 258 B  
 COOPCO: West Delta 45 A  
 COOPCO: West Delta 45 C  
 COOPCO: West Delta 45 E  
 COOPCO: West Delta 45 H  
 COOPCO: 9 undeveloped lease blocks (see Appendix G)

Kerr-McGee: Eugene Island 28 A  
 Kerr-McGee: Ship Shoal 219 B  
 Kerr-McGee: Ship Shoal 229 A  
 Kerr-McGee: Ship Shoal 239 A

Marathon: East Cameron 321 A  
 Marathon: Eugene Island 349 B  
 Marathon: South Pass 86 C  
 Marathon: South Pass 89 B  
 Marathon: Vermilion 331 A  
 Marathon: Vermilion 369 A  
 Marathon: Vermilion 386 B  
 Marathon: West Cameron 620 A  
 Marathon: West Delta 79 A  
 Marathon: 71 undeveloped lease blocks (see Appendix H)

Shell: Grand Isle 33  
 Shell: Green Canyon 65 A  
 Shell: Main Pass 252 A  
 Shell: Main Pass 310 A  
 Shell: Mississippi Canyon 194 A  
 Shell: South Marsh Island 130 B  
 Shell: South Marsh Island 130 C  
 Shell: South Pass 70 C

Shell: South Timbalier 26 C  
Shell: Vermilion 221  
Shell: Vermilion 340 A  
Shell: 852 undeveloped lease blocks (see Appendix K)

SWEPI: Ellen  
SWEPI: Elly  
SWEPI: Eureka

Texaco: 28 undeveloped lease blocks (see Appendix L)  
Texaco: 7 developed lease blocks (see Appendix M)  
Texaco E&P: 133 undeveloped lease blocks (see Appendix N)  
Texaco E&P: 29 developed lease blocks (see Appendix O)  
Texaco Four Star: 3 undeveloped lease blocks (see Appendix P)  
Texaco Four Star: 1 developed lease block (see Appendix Q)

UNOCAL: Eugene Island 32 A  
UNOCAL: Eugene Island 212  
UNOCAL: Ship Shoal 253 A  
UNOCAL: Ship Shoal 266 B  
UNOCAL: Ship Shoal 269 A  
UNOCAL: South Marsh Island 49 A  
UNOCAL: Vermilion 147 A  
UNOCAL: 4 undeveloped lease blocks (see Appendix R)

EPA is denying these requests in part because the measurement of oil and grease by Standard Method 5520F (Total Petroleum Hydrocarbons) as suggested by the applicants would give an incomplete characterization of the discharge by not measuring all the oil and grease that is in fact treated by improved gas flotation. A detailed discussion of both methods is provided in section 4.1 of this Tentative Decision. Additional rationale for denying individual applicants listed above is provided in sections 4.0, 4.2, 4.3, and 4.4 of this Tentative Decision.

The following applicants request effluent limits for oil and grease of 32 mg/l daily maximum and 17 mg/l monthly average as measured by Standard Method 5520F (Total Petroleum Hydrocarbons) be accepted as equivalent demonstration for compliance with Total Oil & Grease limitations as measured by EPA Method 413.1:

Chevron: East Cameron 272 A  
Chevron: East Cameron 272 D  
Chevron: Ship Shoal 108 D  
Chevron: Ship Shoal 181 B  
Chevron: Ship Shoal 182 C  
Chevron: South Marsh Island 78 B  
Chevron: South Marsh Island 61 E  
Chevron: 118 developed/undeveloped lease blocks (see Appendix D)  
Chevron: 573 undeveloped lease blocks (see Appendix E)

Freeport McMoRan: Main Pass 299 FP

PEPCO: East Cameron 334 B  
PEPCO: Eugene Island 333 A  
PEPCO: Eugene Island 330 C  
PEPCO: 44 undeveloped lease blocks (see Appendix I)

PPC: Eugene Island 215 B  
PPC: Eugene Island 305B  
PPC: Eugene Island 315 A  
PPC: Sabine Pass 13A Auxiliary  
PPC: South Marsh Island 48 B Auxiliary  
PPC: West Cameron 551 A  
PPC: 79 undeveloped lease blocks (see Appendix I)

In addition to the rationale presented against the use of Standard Method 5520F for the previous group of dischargers, EPA is denying these requests in part because the applicants have failed to demonstrate that they are using treatment systems which will achieve BAT-level treatment efficacy. Additional rationale for denying individual applicants listed above is provided in sections 4.0, 4.2, 4.3, and 4.4 of this Tentative Decision.

#### 4.0 EPA'S REVIEW OF OGICs' REQUEST

The materials submitted by OGICs have been thoroughly evaluated and considered in the determination of this variance request. EPA is proposing to deny this request because the OGICs have not substantiated that the facilities are in fact fundamentally different with respect to the factors specified in section 301(n) of the CWA and 40 CFR Part 125 and considered by the EPA in establishing the Offshore Guidelines. Further, with respect to undeveloped lease blocks that constitute new sources as defined in 40 CFR Part 435, EPA is denying this request because the CWA precludes EPA from granting FDF variances for new sources. See E.I. duPont v. Train, 430 U.S. 112, 138 (1977) ("It is clear that Congress intended these regulations [NSPS] to be absolute prohibitions . . . there is no statutory provision for variances . . .").

Additionally, a number of the applicants have failed to demonstrate their need for a FDF variance for at least one of two reasons. First, based on data provided in the FDF variance requests, many applicants are currently meeting the Offshore Effluent Limitations Guidelines of 29 mg/l monthly average, 42 mg/l daily maximum. Because these facilities have submitted data in their application demonstrating that they are meeting the limits they seek a variance from, these facilities have shown that they do not need an FDF variance, and that even if there were a fundamental difference, any such variance would be unable to meet the requirement that it be "no less stringent than justified by the fundamental difference." (CWA section 301(n)).

Second, many applicants' FDF variance requests provide data that appear to indicate that the facility is unable to meet the oil and grease limitations (or provide no effluent data), but these petitioners either (1) fail to indicate whether or not they are using improved gas flotation or similar level of BAT control or (2) indicate that they are not using improved gas flotation or other BAT-level treatment technology. As such, EPA is denying these FDF variance requests where the application does not indicate that the facility is using treatment technology comparable to the technology upon which BAT limitations were based (i.e., improved gas flotation), including, where appropriate, chemical addition along with proper operation and maintenance (see Chapter IX of the Development Document for the Offshore Guidelines for a discussion of improved gas flotation technology). (**Ref. 2**) Under the CWA, the applicant for a variance request bears the burden of demonstrating that it is fundamentally different; and here, the applicant has failed to demonstrate that it has attempted to meet the limits by installing the technology upon which the effluent guidelines are based or comparable treatment technology.

Applications proposed to be denied based on the above-mentioned reasons are summarized in section 4.0 as follows:

(a) Facilities that have failed to demonstrate their need for an FDF variance because information in their variance request application states that they are currently meeting the offshore effluent limitations guidelines of 29 mg/l monthly average, 42 mg/l daily maximum:

Anadarko: High Island A-376 A

ARCO: Mississippi Canyon 148 A

ARCO: Ship Shoal 91 'A/B'

ARCO: South Pass 60 C

ARCO: South Pass 60 D

Chevron: Ship Shoal 181 B

Chevron: South Marsh Island 78 B

Conoco: East Cameron 57 JA

Conoco: Grand Isle 43 AP

Conoco: Main Pass 296 B

Conoco: Vermilion 22 B

COOPCO: Eugene Island 257 E

COOPCO: West Delta 45 A

COOPCO: West Delta 45 C

Freeport McMoRan: Main Pass 229 FP

Kerr-McGee: Eugene Island 28 A

Kerr-McGee: Ship Shoal 219 B

Kerr-McGee: Ship Shoal 229 A

Kerr-McGee: Ship Shoal 239 A

Marathon: Eugene Island 349 B

Marathon: South Pass 86 C

Marathon: South Pass 89 B

Marathon: Vermilion 331 A

Marathon: Vermilion 369 A

Marathon: Vermilion 386 B

Marathon: West Cameron 620 A

Marathon: West Delta 79 A

PEPCO: East Cameron 334B

PEPCO: Eugene Island 333A

PPC: Eugene Island 305B

PPC: Eugene Island 315 A

PPC: Sabine Pass 13A Auxiliary

Shell: Green Canyon 65 A

Shell: Main Pass 252 A

Shell: Main Pass 310 A

Shell: Mississippi Canyon 194 A

Shell: South Timbalier 26 C

Shell: Vermilion 221  
Shell: Vermilion 340 A

Texaco E&P: 29 developed lease blocks (according to their application, are meeting limitations, or can meet with treatment system modifications)(see Appendix L)

Texaco: 7 developed lease blocks (according to their application, are meeting limitations, or can meet with treatment system modifications)(see Appendix M)

Texaco Four Star: 1 developed lease block (according to their application, are meeting limitations, or can meet with treatment system modifications)(see Appendix Q)

UNOCAL: Eugene Island 32 A  
UNOCAL: Eugene Island 212  
UNOCAL: Ship Shoal 253 A  
UNOCAL: Ship Shoal 266 B  
UNOCAL: Ship Shoal 269 A  
UNOCAL: South Marsh Island 49 A  
UNOCAL: Vermilion 147 A

**(b) Facilities that provided data that appear to indicate that the facility currently exceeds the oil and grease limitations (or provides no effluent data for the facilities in which a variance is sought), but have failed to demonstrate their need for an FDF variance because their variance request application indicates 1)they are not currently using improved gas flotation or similar level of BAT control or 2) they fail to indicate whether they are using improved gas flotation or similar level of BAT technology:**

Chevron: East Cameron 272 D  
Chevron: Ship Shoal 182 C  
Chevron: South Marsh Island 61 E

Conoco: East Cameron 33 A\*  
Conoco: East Cameron 33 D\*  
Conoco: East Cameron 42 C\*  
Conoco: East Cameron 47 JP\*  
Conoco: Eugene Island 243 A\*  
Conoco: Eugene Island 266 C\*  
Conoco: Eugene Island 266 E\*  
Conoco: Eugene Island 267 I\*  
Conoco: Ewing Bank 305 A\*  
Conoco: Grand Isle 47 AP\*  
Conoco: Green Canyon 52 CPP  
Conoco: Main Pass 288 A\*  
Conoco: Main Pass 296 A\*  
Conoco: Main Pass 296 C\*  
Conoco: Main Pass 311 A  
Conoco: Main Pass 311 B\*

Conoco: Ship Shoal 198 GP\*  
Conoco: South Marsh Island 106 A\*  
Conoco: South Marsh Island 108 D\*  
Conoco: South Marsh Island 108 G\*  
Conoco: South Marsh Island 137 A

Conoco: South Pass 75 A\*  
Conoco: West Cameron 65 JA\*  
Conoco: West Cameron 66 A\*  
Conoco: West Cameron 66 B\*  
Conoco: West Cameron 66 C\*  
Conoco: West Delta 70 I\*  
Conoco: West Delta 94 G\*

COOPCO: Eugene Island 258 B

Marathon: East Cameron 321 A

PEPCO: Eugene Island 330 C

PPC: Eugene Island 215 B  
PPC: South Marsh Island 48 B Auxiliary  
PPC: West Cameron 551 A

Shell: Grand Isle 33  
Shell: South Marsh Island 130 B  
Shell: South Marsh Island 130 C  
Shell: South Pass 70 C

SWEPI: Ellen  
SWEPI: Elly  
SWEPI: Eureka

\*These facilities are listed on a single application with no data to support their request for a FDF variance. The applicants claim that based on effluent data from "similar" platforms, these facilities may not be able to meet the BAT effluent limitations of 29 mg/l monthly average and 42 mg/l daily maximum. Since EPA can only consider effluent data and supporting information from the facility in question, a variance cannot be granted to these facilities.

#### **4.1 BACKGROUND REGARDING ANALYTICAL METHODS FOR MEASURING OIL AND GREASE IN PRODUCED WATER**

As part of the Offshore Guidelines rulemaking, EPA considered the same argument that is being made here. Industry urged EPA to base the effluent limitations guidelines on improved operation of gas flotation technology and submitted data to EPA upon which the BAT limits were established. At the same time, however, as part of formal written comments on the rulemaking, industry argued in a Petition ("Petition for Review and Revision Submitted by the Offshore Operators Committee") that EPA should



have established the oil and grease limits based on Standard Method 5520F (also known as EPA Method 503E) and claimed that gas flotation does not treat what the industry termed as "nonhydrocarbon organic compounds." (R.VIII.A.42 Vol 3, TAB 1) In its comments on the rulemaking, industry also referred to these constituents of the total oil and grease in produced water as "dissolved" or "soluble" oil and grease.

EPA evaluated Method 413.1 (total oil and grease) and Method 503E (now called Method 5520F) in setting the BAT limits for oil and grease. Under Method 413.1, Freon is mixed with a sample of produced water. The container is then left at rest to separate the water phase from the Freon phase, which includes those contaminants in produced water that dissolve in Freon. Following separation and distilling of the Freon phase, the residue remaining is weighed and reported as the weight of "oil and grease" in that sample of produced water.

Under Method 5520F, the same steps are followed, with one exception. After the Freon layer is drained from the container, but prior to distillation, silica gel is added to the Freon, and then removed. The Freon is then distilled and the residue weighed. Because the silica gel has the ability to adsorb polar materials (e.g., some of the hydrocarbons and fatty acids present) that otherwise would have been measured as oil and grease in the Freon residue by Method 413.1, the analytical result reported under Method 5520F is less than that reported under Method 413.1.

Because the analytical method for Total Oil and Grease (EPA Method 413.1) measures more of the oil and grease in produced water, it gives a more complete picture of the efficiency of the treatment system and the contaminants remaining in the effluent. As explained more fully in the record for the Offshore Guidelines, EPA fully considered and rejected the OGICs argument that what the industry during the rulemaking called "dissolved" oil and grease during the rulemaking and what applicants call "non-hydrocarbon organic compounds" here, were not treated by improved gas flotation. In short, EPA had influent and effluent data showing that improved gas flotation treats the oil and grease measured by EPA Method 413.1. (See Ref. 2, Ref. 4, Ref. 5, and Ref. 6(pp.70-91; study entitled Oil Content in Produced Brine on Ten Louisiana Production Platforms(Sept. 1981) (Rulemaking Record Index: R.I.G(No. 194))("EPA's Ten Platform Study"); EPA's Response to Comment K.269A at K-335 to K-336(R.VIII.B(3)(1)); Analysis of Oil and Grease Data, Chapter 8 (R. VIII.G(1)(1)(Att. 1) EPA has in the past (for its BPT limits issued in 1979), and in the final BAT limitations, based its limits (and compliance with those limits) on Total Oil and Grease as measured by Method 413.1. In litigation challenging these limits, the U.S. Court of Appeals for the Sixth Circuit upheld the limits. B.P. Exploration & Oil et. al v. U.S. EPA 66 F.3d 784 (6th Cir. 1995)

#### **4.2. APPLICANTS HAVE FAILED TO SHOW HOW THEIR FACILITIES ARE FUNDAMENTALLY DIFFERENT THAN FACILITIES CONSIDERED BY THE ADMINISTRATOR IN ESTABLISHING THE OFFSHORE GUIDELINES**

As stated above, EPA is tentatively denying certain FDF applications either because the facilities are currently meeting the limitations, they have not specified that they have attempted to meet the limits by use of improved gas flotation or other appropriate technology, or they have affirmatively stated that they are not using improved gas flotation. The following addresses a small number of the applicants currently discharging that appear to be using gas flotation equipment that have submitted limited data indicating that their facilities have not met the BAT effluent limitations. EPA is denying these request because the applicants have failed to fully describe their respective treatment systems and any actions taken to optimize these systems to achieve BAT-level performance. These applicants are as follows:

Chevron: East Cameron 272 A  
Chevron: Ship Shoal 108 D

COOPCO: West Delta 45 E  
COOPCO: West Delta 45 H

SWEPI: Ellen  
SWEPI: Elly  
SWEPI: Eureka

The following discussion also addresses a larger group of facilities that may be able to meet the limits but for which the applicants assert the facilities may not always be able to meet the limits as the concentration of oil and grease in produced water may increase over time. These applicants are as follows:

ARCO: Brazos 451 A  
ARCO: East Cameron 060 A  
ARCO: Eugene Island 175 B  
ARCO: High Island 177 A  
ARCO: High Island 024-L A  
ARCO: High Island 024-L B  
ARCO: Matagorda Island 668 A  
ARCO: Matagorda Island 591 A  
ARCO: Matagorda Island 703 A  
ARCO: Mustang Island 762 A  
ARCO: Ship Shoal 178 A

In support of their FDF variance requests, applicants have not submitted any substantial new data not already considered by EPA as part of the Offshore Guidelines rulemaking. In summary, applicants have cited much of the same data they cited and or submitted to EPA during the Offshore Guidelines rulemaking to make an argument that improved gas flotation does not treat what FDF applicants call "dissolved" oil and grease and to challenge

the final Offshore regulations. EPA rejected that argument in the rulemaking, litigated that disagreement against petitioners, and was successful in this litigation, as discussed below. Based on data in the Offshore Guidelines rulemaking record showing influent and effluent data of oil and grease as measured by Method 413.1, EPA continues to believe that its final offshore regulations are achievable. Second, the new data that applicants have included in their FDF requests are insufficient to demonstrate that certain platforms when using the appropriate BAT technology cannot achieve the limits. Finally, applicant's assertion that concentrations of oil and grease may increase over time, which itself is a new and unsupported assertion by the applicants, alone does not by itself demonstrate that certain platforms when using and properly operating the appropriate BAT technology cannot achieve the limits.

**(a) Much of What the FDF Applicants Have Submitted Was Already Considered By EPA During the Offshore Guidelines Rulemaking**

EPA rejected the applicants' argument in the rulemaking because empirical data demonstrated that what industry calls "dissolved" oil and grease, and what applicants characterize here as "nonhydrocarbon organic compounds" are in fact treated by improved gas flotation to meet the BAT limitations, as measured by Method 413.1. Specifically, the data included oil and grease measurements from both influent and effluent produced water using variants of EPA Method 413.1 and Standard Method 503E. (1993 Dev. Doc. R.VIII.B.(2)(1), p. V-14). [The full title of the study is Oil Content in Produced Brine on Ten Louisiana Production Platforms; September 1981. R.I.G.(no.194).] Using these data, EPA estimated the percentage of oil and grease that was removed from the produced water influent by improved gas flotation. The data showed that improved gas flotation does in fact treat significant percentages of the constituents which the applicants refer to as "non-hydrocarbon organic compounds" and which the Petitioners claim to be not removed by gas flotation. See Analysis of Oil and Grease Data at 8-4 (Table 8-3, Col.2) (R.VIII.G(1)(1)(Att. 1)). **(Ref. 4)** Specifically, the data demonstrate removals of "dissolved" oils ranging from a low of 58 percent up to a high of 98 percent. These data include untreated produced water "dissolved" oil concentrations as high as 1,510 mg/l, or higher than any "dissolved" oil concentrations reported by applicants in their FDF variance requests. **(Ref. 3)**

In response to comments that EPA use Method 503E rather than 413.1, EPA stated:

[EPA] is not basing produced water limitations on measurements made by Method 503E [Method 5520F] because soluble ["nonhydrocarbon organic compounds"] were accounted for when setting this rule's effluent limitations on oil and grease in produced water effluent and because improved gas flotation removes compounds characterized by the [industry]

commenter as being "soluble." EPA Response to Comment Document K.269A at K-335 to K-336 (R.VIII.B(3)(1)).

This issue whether the technology upon which EPA's BAT limits were based treated what the industry calls "dissolved" oil and grease was litigated in consolidated Petitions for Review of the Offshore Guidelines and EPA's analysis of this data is summarized in EPA's brief pp. 70-91 (**Ref. 6**), and in BP Exploration and Oil Inc., et al. v. U.S. EPA, 66 F.3d 784 (6th Cir. 1995) (**Ref. 5**). The Court upheld EPA's limitations finding, "This Court must defer to EPA's discretionary judgement when EPA has made a reasonable decision based on reliable data." BP at 794.

**(b) "New" Data Submitted is Insufficient to Evaluate Whether, Using Improved Gas Flotation, Oil and Grease as Measured by Method 413.1 Could Not be Treated to Meet the Limits Established in the Offshore Guidelines.**

To conduct an independent assessment of the merits of the OGIC assertions regarding treatability, EPA needs accurate information and data on the design and operation of the wastewater treatment system including sufficient representative influent and effluent daily oil and grease data. The Agency's principal goal is to ensure that decisions related to the variance request for relief from the limits in the regulation be based on a record that contains objective relevant information and data. The missing information and data necessary for an independent evaluation of OGIC's claims includes items such as those described in Appendix B. In addition, the Agency is interested in reviewing additional data which may have been collected, other than the specific information outlined in Appendix B, which may better explain OGIC's assertions.

In reviewing the OGIC variance requests, EPA cites the following deficiencies in the data: the minimum amount of effluent wastewater characterization data, the absence of any useful influent wastewater characterization data, the absence of any useful information regarding the design and operation of the current wastewater treatment system, and the lack of any studies illustrating the oil and grease reductions actually achieved by the treatment systems, as measured by EPA Method 413.1. Additionally, none of the applicants submitted any information that would indicate concentrations of oil and grease would increase over time, or any data supporting how such increases would cause facilities that are able to meet the BAT effluent limitations now to be unable to achieve these limitations at a later date. This is a new and unsupported assertion for which the industry has provided no data to prove its claim.

As described above, variance applications for seven facilities indicate the use of some form of chemical addition combined with gas flotation treatment and provide limited effluent data indicating that their facilities are unable to meet

the effluent limitations. EPA notes, however, that there are several additional considerations that together define BAT technology. Specifically, BAT technology, as described in the Offshore Guidelines Development Document (**Ref. 2, pg. IX-25**), consists of:

- (1) gas flotation,
- (2) chemical pretreatment to enhance system effectiveness,
- (3) improved operation and maintenance of the gas flotation treatment system,
- (4) more operator attention to treatment systems operations, and
- (5) possible resizing of certain treatment system components for increased treatment efficiency.

None of the seven applicants describe their treatment systems in great enough detail to determine if the facility is implementing improved gas flotation as described in the Offshore Guidelines rulemaking. For example, the two Chevron applications (East Cameron 272 A and Ship Shoal 108 D) both provide a description of their treatment systems as:

"After separation, produced water is treated via a Petrolite mechanical dispersed gas flotation unit. Treatment chemicals are used to enhance separation efficiency."

The two COOPCO applications (West Delta 45 E and West Delta 45 H) provide slightly more detail about treatment operations, yet fail to indicate use of any of the key components of improved gas flotation (as described above) in their description beyond "dissolved-air flotation" and addition of a "water clarifier" chemical.

The three SWEPI applications (Platforms Ellen, Elly and Eureka) provide the most detail of any of the seven applications discussed. However, their application also fails to indicate the key components of improved gas flotation in their description beyond the use of "improved gas flotation" and of a "polymer" to improve the oil removal in the flotation unit.

EPA also questions the data submitted by the applicants in terms of its representativeness for comparing with the effluent limitations. None of the 67 applications that included effluent data indicated whether the effluent data provided in the applications represents single grab samples or composite samples. Daily maximum and monthly average limitations, as defined in 40 CFR Part 435, are to be based on composite samples (i.e., four grab samples collected over a 24-hour period and analyzed separately). Comparison of sample results with the effluent limitations is to be done by averaging the four grab sample results for any given day. For most if not all of the applications, it appears as though the data represent single grab samples, which are not comparable to effluent limitations. As such, without additional documentation demonstrating the use of

composite samples (as specified in 40 CFR Part 435), EPA disagrees with 'applicants' claims based on the use of these data to justify a variance. Even if the data presented in the FDF variance applications are analytical results for composite samples, the extremely limited data (in most cases two or three data points) in combination with the failure to fully describe the treatment systems and actions taken to optimize these systems to achieve BAT-level performance are not sufficient to justify a variance.

In the case of the seven applicants operating gas flotation systems in conjunction with chemical addition who claim they are unable to achieve compliance with the BAT limitations, there are specific concerns with the limited data and information provided. In all seven instances, the data fail to support the applicants' claims regarding the ability to achieve limitations due to the presence of "nonhydrocarbon organic compounds". A summary of the major data concern for each of these four facilities follows:

Chevron: East Cameron 272 A

This applicant submitted four days of effluent data from August 1993 in its FDF variance request. The data presented indicate average and maximum total oil and grease concentrations (as measured by EPA Method 413.1) of 53.5 mg/l and 62 mg/l, respectively. The data also indicate average and maximum total petroleum hydrocarbon concentrations (as measured by Standard Method 5520F) of 36.8 mg/l and 58 mg/l, respectively. These data, as well as a close review of the applicant's own arguments, indicate that the treatment system at this facility is poorly operated and insufficient effort has been made to optimize system performance to achieve BAT-level treatment efficacy.

In its FDF variance application, the applicant has presented these data as representative of its typical produced water effluent at the platform. If these data are truly representative, then it is appropriate to assume that the calculated average total oil and grease concentration (53.5 mg/l) represents the typical monthly average total oil and grease concentration in the platform discharge. This total oil and grease concentration exceeds the BPT limitation established in 1979 of 48 mg/l (monthly average) and would indicate that this platform has regularly discharged effluent in violation of permit limits.

The applicant claims that it is unable to achieve the BAT effluent limitations due to the presence of "nonhydrocarbon organic compounds" which it claims are not treatable by improved gas flotation. As discussed elsewhere in this Tentative Decision and explained more fully in the record for the final Offshore Guidelines, EPA fully considered and rejected this argument made by the applicant. Industry petitioners filed suit on this precise issue. In its review of the Offshore Guidelines, the

Court agreed with EPA's finding that what the applicant terms "nonhydrocarbon organic compounds" is removed by improved gas flotation and upheld the use of Method 413.1 (total oil and grease) for establishing BAT effluent limitations. (See Ref. 5) While rejecting the argument made by the applicant against the use of Method 413.1, it is worthwhile to look more closely at the data provided by the applicant in support of its suggestion that BAT limitations for the facility should be based on Standard Method 5520. In this argument, the applicant proposes that it should be provided a variance from the existing BAT effluent limitations and that the platform should instead have effluent limitations established at 32 mg/l total petroleum hydrocarbons (TPH) as a daily maximum and 17 mg/l TPH as a monthly average. Yet the data provided in fact demonstrate that if the platform were granted a variance as requested by the applicant, the existing treatment system as it was operated at the time of sampling actually would not have enabled the platform to comply with these alternative limitations on TPH. The daily maximum TPH limitation proposed by the applicant was exceeded on three out of the four days for which data were provided, and the average value of the TPH data (representing the monthly average) is double the alternative TPH limitation proposed by the applicant. This further supports EPA's determination that the treatment system at this facility is poorly operated and insufficient effort has been made to optimize system performance to achieve BAT-level treatment efficacy.

EPA believes the existing treatment system, while consisting of a gas flotation unit supplemented with chemical addition, does not represent BAT-level treatment. The BAT limitations based on improved gas flotation are achievable if the treatment system is properly sized and well-operated and maintained. There are a number of operational factors which must be closely controlled by the operator to ensure proper system performance. Appendix B identifies specific information deficiencies identified by EPA. The information identified in Appendix B is representative of the types of operational and system design data needed to evaluate the existing treatment processes, and is indicative of the factors which an operator must proactively control to achieve BAT-level performance. The applicant has not provided information demonstrating that its treatment system or a well-designed replacement system is unable to achieve BAT pollutant reductions. Further, the applicant has made no attempt here to describe efforts undertaken to modify and optimize the existing treatment system to achieve better pollutant reductions.

In summary, the applicant's claim that it is unable to achieve the effluent limitations due to the presence of "nonhydrocarbon organic compounds" is unsupported by the data provided. Rather, the majority of the oil and grease in the produced water effluent is a result of untreated petroleum hydrocarbons. Without additional information, EPA considers these data to be indicative of non-BAT level treatment systems.

#### Chevron: Ship Shoal 108 D

The applicant has not provided information demonstrating that its existing treatment system is unable to achieve compliance with the BAT limitations. The applicant submitted effluent data for one unspecified date in February 1991 and four days in August 1993 in its FDF variance request. The data collected in August 1993 indicate average and maximum total oil and grease concentrations (as measured by EPA Method 413.1) of 20 mg/l and 23 mg/l, respectively. The August 1993 data also indicate average and maximum total petroleum hydrocarbons concentrations (as measured by Standard Method 5520F) of 10.8 mg/l and 13 mg/l, respectively. As these values are well below the BAT effluent guidelines limitations (29 mg/l monthly average; 42 mg/l daily maximum), this facility has failed to demonstrate its need for a variance, comparable to the facilities identified in Section 4.0(a) of this tentative decision.

The February 1991 sample was collected more than two years before the BAT limitations were published and represent data from a period where the platform was required to comply with a BPT maximum daily limitation of 72 mg/l. The February 1991 data is not comparable to the August 1993 data because, since BAT had not yet been promulgated, the operator was not required to achieve compliance with the BAT limits.

#### COOPCO: West Delta 45 E

This applicant submitted two consecutive days of effluent data from August 1993 in its FDF variance request. The data indicate average and maximum total oil and grease concentrations (as measured by EPA Method 413.1) of 28 mg/l and 31 mg/l, respectively. The data also indicate average and maximum total petroleum hydrocarbons concentrations (as measured by Standard Method 5520F) of 20 mg/l and 23 mg/l, respectively. The applicant's claim that it is unable to meet the BAT effluent guidelines limitations is not supported by the extremely limited data provided. The total oil and grease concentrations for the two data points provided are well below the daily maximum BAT limitation (42 mg/l) and the average of the two data points is nearly equal to the BAT monthly average limitation (29 mg/l). These total oil and grease data, in conjunction with the relatively high levels of untreated petroleum hydrocarbons, indicate that compliance with the BAT limitations is achievable.

High levels of untreated petroleum hydrocarbons are indicative of a treatment system which is not operating at BAT-level performance. The BAT limitations based on improved gas flotation are achievable if the treatment system is properly sized and well-operated and maintained. There are a number of operational factors which must be closely controlled by the operator to ensure proper system performance. Appendix B identifies specific information deficiencies identified by EPA. The information identified in Appendix B are representative of



the types of operational and system design data needed to evaluate the existing treatment processes, and are indicative of the factors which an operator must proactively control to achieve BAT-level performance. The applicant has not provided information demonstrating that its existing treatment system or a well-designed upgrade/replacement system is unable to achieve compliance with the BAT limitations. Further, the applicant has made no attempt here to describe efforts undertaken to modify and optimize the existing treatment system to achieve better pollutant reductions.

In summary, the applicant's claim that it is unable to achieve the effluent limitations due to the presence of "nonhydrocarbon organic compounds" is unsupported by the data provided. Rather, the majority of the oil and grease in the produced water effluent is a result of untreated petroleum hydrocarbons. Without additional information, EPA considers these data to be indicative of non-BAT level treatment systems.

#### COOPCO: West Delta 45 H

This applicant submitted two consecutive days of effluent data from August 1993 in its FDF variance request. The data indicate average and maximum total oil and grease concentrations (as measured by EPA Method 413.1) of 45 mg/l and 49 mg/l, respectively. The data also indicate average and maximum total petroleum hydrocarbons concentrations (as measured by Standard Method 5520F) of 34.5 mg/l and 36 mg/l, respectively. These data indicate that the treatment system at this facility is poorly operated and insufficient effort has been made to optimize system performance to achieve BAT-level treatment efficacy.

The applicant's claim that it is unable to meet the BAT effluent guidelines limitations is not supported by the extremely limited data provided. The data provided by the applicant show relatively high levels of untreated petroleum hydrocarbons, which are indicative of a treatment system that is not operating at BAT-level performance. The BAT limitations based on improved gas flotation are achievable if the treatment system is properly sized and well-operated and maintained. There are a number of operational factors which must be closely controlled by the operator to ensure proper system performance. Appendix B identifies specific information deficiencies identified by EPA. The information identified in Appendix B are representative of the types of operational and system design data needed to evaluate the existing treatment processes, and are indicative of the factors which an operator must proactively control to achieve BAT-level performance. The applicant has not provided information demonstrating that its existing treatment system or a well-designed upgrade/replacement system is unable to achieve compliance with the BAT limitations. Further, the applicant has made no attempt here to describe efforts undertaken to modify and optimize the existing treatment system to achieve better pollutant reductions.

In summary, the applicant's claim that it is unable to achieve the effluent limitations due to the presence of "nonhydrocarbon organic compounds" is unsupported by the data provided. Rather, the majority of the oil and grease in the produced water effluent is a result of untreated petroleum hydrocarbons. Without additional information, EPA considers these data to be indicative of non-BAT level treatment systems.

SWEPI: Platforms Ellen, Elly and Eureka

This applicant has submitted data from seven consecutive days in June 1990, two days in July 1990, and two consecutive days in August 1993. The data indicate average and maximum total oil and grease concentrations (as measured by EPA Method 413.1) of 64.8 mg/l and 73.2 mg/l, respectively. The data also indicate average and maximum total petroleum hydrocarbon concentrations of 7.0 mg/l and 25.0 mg/l, respectively. These platforms are not currently discharging into surface waters of the U.S. Produced water from these platforms is treated and reinjected into the producing formation. To accomplish this, the treatment system likely has been designed and operated to meet the requirements of reinjection (i.e., optimized for solids removal) and may not be optimized for oil and grease removal.

SWEPI is seeking a FDF variance claiming that it may change its treatment practice from reinjection to ocean discharge during the life of the platforms. Since there is currently no discharge, there is no incentive to optimize the treatment system to meet the BAT effluent limitations for oil and grease. High levels of total oil and grease are indicative of a treatment system which is not operating at BAT-level performance. The BAT limitations based on improved gas flotation are achievable if the treatment system is properly sized and well-operated and maintained. There are a number of operational factors which must be closely controlled by the operator to ensure proper system performance. Appendix B identifies specific information deficiencies identified by EPA. The information identified in Appendix B are representative of the types of operational and system design data needed to evaluate the existing treatment processes, and are indicative of the factors which an operator must proactively control to achieve BAT-level performance. The applicant has not provided information demonstrating that its existing treatment system or a well-designed upgrade/replacement system is unable to achieve compliance with the BAT limitations. Further, the applicant has made no attempt here to describe efforts undertaken to modify and optimize the existing treatment system to achieve better pollutant reductions. Therefore the data presented in the SWEPI application is not relevant to its argument that large amounts of "nonhydrocarbon organic compounds" would prevent these platforms from meeting the BAT limits for oil and grease.

In summary, the applicant's claim that it is unable to achieve the effluent limitations due to the presence of "nonhydrocarbon organic compounds" is unsupported by the data

provided. In fact, the data presented is not relevant because it is indicative of a treatment optimized to support reinjection instead of direct discharge into the ocean. Without additional information, EPA considers these data to be indicative of non-BAT level treatment systems.

#### **4.3 APPLICANTS HAVE NOT DEMONSTRATED WHY THE DATA THEY HAVE PROVIDED HERE COULD NOT HAVE BEEN PROVIDED DURING THE RULEMAKING**

The limited new data applicants have submitted, as stated above, consists of a total of 211 effluent samples, which were analyzed using EPA Method 413.1 and using Standard Method 5520F. Forty (40) applications out of the 84 applications submitted did not include any monitoring data in their applications. These data are not sufficient to evaluate whether using improved gas flotation, oil and grease as measured by Method 413.1 could not be treated to meet the limits established in the Offshore Guidelines.

Even if the new data were sufficient to justify an FDF variance, applicants must show that they could not have reasonably submitted these data during the rulemaking. CWA §301(n)(1)(B)(ii). Applicants have not made this demonstration.

EPA began working on the Offshore Guidelines rulemaking in the late 1970s, and first issued a proposed rule in 1985. EPA issued subsequent notices in 1988, 1990, and 1991. The FDF applicants had ample opportunity to present data to EPA during this time period and have failed to justify here why they could not have reasonably done so. In each of these notices, EPA made clear that it was seeking to revise the oil and grease limits and solicited data and information from industry on the proposed limits. [See 50 FR 34592 (August 26, 1985) in which EPA proposed BAT and BCT effluent limitations guidelines and new source performance standards for the offshore subcategory which included limits for produced water. On November 26, 1990, EPA published a notice and re-proposal (55 FR 49094) that presented the major BCT, BAT and NSPS regulatory options under consideration for control of produced water. On March 13, 1991 (56 FR 10664), EPA published another notice proposing BAT, BCT and NSPS limitations and standards for the offshore subcategory. The regulatory options for produced water presented were the same as those proposed on November 26, 1990.] In response to these notices, industry argued that EPA should base the limits on improved gas flotation and submitted data to EPA, which EPA used to establish the limits. Applicants did not submit the limited "new" data they are submitting to EPA now during the rulemaking, nor have they justified why they could not have submitted it during the multi-year rulemaking process.

#### 4.4 THE CLEAN WATER ACT PRECLUDES APPLICANTS FROM SEEKING A VARIANCE AFTER 180 DAYS AFTER THE DATE ON WHICH SUCH LIMITATION IS ESTABLISHED

In response to applicant's argument that they should be able to retain the right to file for a variance at some future time, the Clean Water Act precludes petitioners from seeking a variance after 180 days after the date on which such limitation is established. 33 U.S.C. §1311(n)(2).

Several OGIC FDF variance request applicants submitted applications for developed and undeveloped lease blocks that have not yet started producing oil and gas. The types of facilities submitting these applications can be divided into three groups of applicants. EPA's evaluation of each of these three is provided below:

**(a) Facilities that currently have no produced water discharges from undeveloped lease sites that are not covered by a general permit.**

Applications from the following developed/undeveloped lease sites state that there are currently no produced water discharges from these facilities:

ARCO:	210 developed/undeveloped lease blocks and all leases acquired in future sales (see Appendix C)
PEPCO:	44 undeveloped lease blocks (see Appendix I)
PPC:	79 undeveloped lease blocks (see Appendix J)

The variance requests for these undeveloped lease blocks do not specify to what extent development or production related activities have occurred (e.g., significant site preparation). As specified in CWA §301(n), FDF variances do not apply to new source performance standards. See E.I. duPont v. Train 430 U.S. 112, 138 (1977).

According to 40 CFR §122.2, a "new source" is any building, structure, facility, or installation, from which there is or may be a "discharge of pollutants," the construction of which commenced:

- i) after promulgation of NSPS which are applicable to such source, or
- ii) after the proposal of NSPS, if those standards are promulgated within 120 days of their proposal.

Pursuant to 40 CFR §122.29(b)(4), construction, as defined by 40 CFR §122.2, has commenced if the owner or operator has:

- i) Begun, or caused to begin as part of a continuous on-site construction program, any placement, assembly, or installation of facilities and equipment or significant site preparation work; or
- ii) Entered into a binding contractual obligation for the purchase of facilities and equipment which are intended to be used within a reasonable time.

Specific to the Offshore Oil and Gas Extraction Point Source Category, 40 CFR §435.11(p)(1)(ii) defines "significant site preparation work" to be the process of surveying, clearing or preparing an area of the ocean floor for the purpose of constructing or placing a development or production facility on or over the site.

The 40 CFR Part 435 regulations "grandfather" as an existing source those facilities where equipment is in place or where significant site preparation had taken place prior to publication of NSPS, evidencing an intent to establish full scale operations at a site. The regulations also "grandfather" on a temporary basis any facility in a water area covered by a general permit until EPA issues a NSPS general permit. Conversely, if only exploratory drilling had occurred prior to NSPS becoming effective, then subsequent drilling and production wells would be considered to be new sources.

Since the applicants do not provide information or supporting data that would demonstrate that these undeveloped lease blocks are existing sources, EPA considers these facilities to be new sources, (pursuant to 40 CFR §§122.2, 122.29(b)(4), and 435.11(p)) for which FDF variances are not available.

**(b) Facilities that currently have no discharges from undeveloped lease sites, but are covered under an NPDES General Permit.**

A number of undeveloped lease sites claim to be existing facilities covered under the General Permit GMG290000 for the discharge of drilling and production waste and produced water. The following facilities consider themselves existing sources and currently do not discharge :

Chevron:	118 developed/undeveloped lease blocks (see Appendix D)
Chevron:	573 undeveloped lease blocks (see Appendix E)
Conoco:	203 undeveloped lease blocks (see Appendix F)
COOPCO:	9 undeveloped lease blocks (see Appendix G)
Marathon:	71 undeveloped lease blocks (see Appendix H)

EPA addressed these types of facilities in its rulemaking as clarified on page III-4 of the *Development Document for Effluent Limitations Guidelines and New Source Performance Standards for the Offshore Subcategory of the Oil and Gas Extraction Point Source Category* (hereinafter *Development Document*). (Ref. 2) As stated above, the final rule for Offshore Oil and Gas Extraction Point Sources temporarily excludes from the definition of "new source" those facilities that as of the effective date of the Offshore Guidelines are subject to an existing general permit pending EPA's issuance of a new source NPDES general permit. As such, FDF variances are available to these types of facilities that demonstrate existence of a fundamentally different factor. However, for the same reasons discussed in Sections 4.1 and 4.2 these facilities do not identify any fundamental differences that would justify a variance.

**(c) Facilities that currently have no discharges from lease sites but the applicant provides insufficient information as to whether they are covered by the General Permit.**

Applications from the following facilities state only that there are currently no discharges from the lease sites:

Shell:	852 undeveloped lease blocks (see Appendix K)
Texaco Four Star:	3 undeveloped lease blocks (see Appendix P)
Texaco E&P:	133 undeveloped lease blocks (see Appendix O)
Texaco:	28 undeveloped lease blocks (see Appendix L)
UNOCAL:	4 undeveloped lease blocks (see Appendix R)

The variance requests for these lease blocks provide no indication of the extent of construction, site preparation, or contractual obligation to purchase equipment. Thus it is difficult to discern whether or not these facilities are existing or new sources. To the extent that these facilities are existing sources, the requests provide no information to substantiate why these lease blocks are fundamentally different than those upon which EPA based the effluent limitations guidelines. Therefore, even though these undeveloped lease sites are requesting a variance, they have failed to carry the burden of proof to demonstrate any fundamentally different factors that would warrant a variance.

## 5.0 TENTATIVE DECISION OF THE REGIONAL ADMINISTRATOR

Based upon the evaluation which appears above and in the administrative record, EPA proposes to deny the FDF requests of the OGICs. The OGICs have failed to demonstrate that the factors at their facilities in the Gulf of Mexico are fundamentally different from those considered by EPA in the development of the ELGs and NSPS for the Offshore Subcategory of the Oil and Gas Extraction Point Source Category as summarized in the *Development Document*.

The tentative decision will be subject to public notice and opportunity for comment. After the close of the public notice period, the final decision will be made. Appeal of the final decision is available under the provisions of 40 CFR §§ 124.64, 124.74 and 124.114.

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Date

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Regional Administrator,  
EPA Region VI

## 6.0 REFERENCES

1. "Request for Variance based on Fundamentally Different Factors" submitted by various applicants, August 27, through September 8, 1993.
2. Development Document for Effluent Guidelines and New Source Performance Standards for the Offshore Subcategory of the Oil and Gas Point Source Category, EPA 821-R-93-003, January, 1993.
3. E.I. duPont v. Train 430 U.S. 112, 138 (1977).
4. Analysis of Oil and Grease Data, Chapter 8, (R. VIII. G(1) (1) (Att. 1)).
5. BP Exploration and Oil, Inc., et al. v. U.S. EPA, (Sixth Circuit No. 93-3310), 95a0297p.06, decided and filed September 28, 1995.
6. EPA Brief, BP Exploration & Oil, Inc., et al. v. U.S. EPA, 66 F.3d 784 (6th Cir. 1995).
7. "Petition for Review and Revision Submitted by the Offshore Operators Committee" (R.VIII.A.42 Vol 3, TAB 1)



## APPENDIX A

### OIL AND GAS PLATFORMS (AND COMPANIES) THAT PARTICIPATED IN THE 30 PLATFORM STUDY

1. East Cameron 33 A (Conoco)\*
2. East Cameron 14 CF (Mobil)
3. Vermilion 119 D (Conoco)
4. Vermilion 255 A (Shell)
5. South Marsh Island 23 B (Gulf)
6. Vermillion 39 D (Shell)
7. South Marsh Island 6 A EI (Exxon)
8. South Marsh Island 57 A-E (Marathon)
9. Eugene Island 115 A (Shell)
10. Eugene Island 120 CF (Mobil)
11. South Marsh Island 130 B (Shell)\*
12. Eugene Island 208 B (Conoco)
13. Eugene Island 18C F (Shell)
14. Eugene Island 238 A (Gulf)
15. Eugene Island 296 B (Placid)
16. Ship Shoal 107 (S9) (Chevron)
17. Ship Shoal 107 (S9) (Chevron)
18. Ship Shoal 219 A (Amoco)
19. South Timbalier 177 (Gulf)
20. BM 2C (Shell)
21. BDC CF5 (Texaco)
22. South Timbalier 135 (Gulf)
23. West Delta 90 A (Amoco)
24. West Delta 45 E (COOPCO)\*
25. West Delta 70 I (Conoco)\*
26. GIB DB600 (Texaco)
27. West Delta 105 C (Shell)
28. South Pass 62 A (Shell)
29. South Pass 24/27 (Shell)
30. South Pass 65 B (Shell)

\* These platforms are among the applicants to the oil and grease limits in the Offshore Oil and Gas Effluent Guideline.

## APPENDIX B

### SPECIFIC INFORMATION DEFICIENCIES IDENTIFIED BY EPA

The following is a summary of specific information deficiencies identified by EPA with the FDF variance applications submitted by the OGICs.

- (1) Detailed schematic diagram(s) of the existing wastewater treatment system including current process and non-process wastewater balances as well as the configuration(s) of chemical addition systems, recycle loops, float sludge and bottom sludge removal, and any other system connections. Clear identification of sampling points corresponding to all data submissions, including the NPDES sampling location.
- (2) Both the design basis and the current operating basis for each component of the wastewater treatment system. In addition, discuss the efforts made, and changes to each relevant operating parameter, in upgrading the treatment system to comply with the BAT effluent limitations for oil and grease.
  - (a) For the gas flotation unit, the design flow rate (gallons per day); the actual average and maximum flow rates (gallons per day); hydraulic retention time (minutes); detention time of floated material (minutes); generation rate (gallons per day) and solids concentration (mg/l) of the float sludge; generation rate (gallons per day) and solids concentration (mg/l) of the bottom sludge; volume of aeration tank (gallons); cross-sectional area of the flotation unit; surface area (ft<sup>2</sup>); design overflow rate (gpm/ft<sup>2</sup>); actual overflow rate (gpm/ft<sup>2</sup>); design air-to-solids ratio (lbs air released per lb of solids in influent); actual air-to-solids ratio (lbs air released per lb of solids in influent); design recycle flow rate; actual recycle flow rate at average and maximum flows; the type of aeration (e.g., dissolved or induced); air supplied per gallon of wastewater (ft<sup>3</sup>/gal); pressure of air supplied to wastewater (psig); wastewater temperature (°C); influent and effluent total oil and grease concentration, as measured by EPA Method 413.1 (mg/l); influent and effluent oil and grease concentration, as measured by Method 5520F (mg/l); influent and effluent total suspended solids concentration (mg/l); influent and effluent pH; type, addition frequency, and dosage information for chemical additives; as well as any other pertinent considerations.
- (3) Provide, at a minimum, the following data for the last year. (If available, data shall be provided for the last three

years.) All available daily influent and effluent oil and grease concentrations (mg/l) and daily total suspended solids concentrations (mg/l) for the treatment system. For each sampling episode, corresponding daily flow and pH. Identification of the specific sample location for each data set and of the corresponding sampling methodology and laboratory analytical methods.

- (4) For the data requested in item (3), the corresponding operator's logs that track the operating characteristics, listed in item (2), for each wastewater treatment unit operation. For the period of record, documentation of the dates of any upsets and changes in the treatment configuration, design and operating methods, and documentation describing the nature of each change or event.